Strategy for implementation of Best Available Retrofit Technology provisions for Wisconsin

The purpose of this document is to provide information and encourage public comments.

General

The regional haze regulation requires all states, including Wisconsin, to revise their State Implementation Plans (SIPs) and include programs to assure reasonable progress toward meeting the national goal of preventing any future, and remedying any existing, impairment of visibility in Class I areas. States are required to complete long-range plans and develop rules for the reduction of air-pollutant emissions causing visibility impairment. To address these requirements, the Department (Wisconsin Department of Natural Resources) is working with neighboring states to conduct studies required to develop the long-range plans.

A main component of the regional haze program is the application of Best Available Retrofit Technology (BART) to certain stationary sources. Since the BART requirements are independent from the ongoing studies for the regional haze plans, the department has started to develop a BART-rule.

Conceptual framework for BART- Rule

The regional haze regulations require that certain stationary sources that may reasonably be anticipated to cause or contribute to visibility impairment in any Class I areas, to install BART. The BART provision applies to stationary sources from 26 identified source categories, which were not in operation prior to August 7, 1962, and were in existence on August 7, 1977, and have the potential to emit 250 tons per year or more of any visibility impairing air pollutant (SO2, NOx, Particulate Matter). These sources are “BART-eligible”. Among the BART-eligible sources, only sources are “subject to BART” that may reasonably be anticipated to cause or contribute to any impairment of visibility in any Class I area. Only a source subject to BART needs to go through a BART determination process to determine the level of emission control and the control technology representing BART.

The Department has identified 26 facilities with BART eligible sources in Wisconsin; ten (10) of them are power plant with electric generating units (EGUs) and the remaining sixteen (16) facilities have BART-eligible sources which are industrial sources other than electric generating units (non-EGUs). Attached is a list of BART-eligible sources in Wisconsin.

The regional haze regulation gives states different options for application of the BART provision. Based on these options the following main approaches are available for the implementation of the BART provisions:

1- BART determination for all sources subject to BART
2- CAIR as BART substitute for EGUs
3- Alternative program

1- BART determination for all sources subject to BART

The State has the authority to exempt BART-eligible sources from BART determination if their impact on visibility impairment is below a defined threshold. The BART-eligible sources, which are not exempted, would be then subject to BART. The state has three options for identification of sources subject to BART:

a) *Consider all BART-eligible sources within the state as sources subject to BART*
The department does not intend to pursue this option because many sources with minor impact on visibility impairment would need to go through a BART determination process, which can be time consuming, expensive and not effective.

b) *Showing that none of the sources in the state contributes to the visibility impairment in any Class I areas and therefore none of the BART-eligible sources is subject to BART*.
This is not a realistic option, because the modeling results have already shown that the BART-eligible sources in Wisconsin do contribute to the visibility impairment in Class I areas.

c) *Consider the individualized contribution of BART-eligible sources to determine whether a specific source is subject to BART or can be exempted*.
The Department intents to pursue this option and has already conducted facility-by-facility modeling analysis to determine the facility specific impacts on Class I areas near Wisconsin. The preliminary modeling results show that 9 facilities with EGUs and 4 facilities with non-EGUs would be subject to BART. These analyses will be finalized before adaptation of the BART rule.

2- CAIR as BART substitute for EGUs

The EPA has determined that CAIR makes greater reasonable progress than BART. Based on this finding the regional haze regulation allows a State affected by CAIR to treat CAIR as a BART-substitute for EGUs if the State opts to participate in the CAIR cap-and-trade program. However, the IPM modeling results, which EPA used to predict future year emissions, projects only very modest emission reductions in Wisconsin. Our analyses indicate that the level of emission reductions achievable through the CAIR cap-and-trade program would not be sufficient to achieve visibility improvements in nearby Class I areas in an extent required to meet the reasonable progress goals.

3- Alternative programs

The State can use other programs, for example a trading program, as an alternative to BART, if it can be shown that the alternative program would achieve greater reasonable progress than BART. A possible approach would be a trading program that satisfies the requirements of CAIR, BART and RACT (reasonably available control technology) for

EGUs. The Department has conceptually developed such a program which integrates CAIR, RACT and BART and is described as “option two” in a separate document.

Current Rule Elements

The Department has begun to prepare a BART-rule based on the following concept:

- The Department would identifies sources subject to BART based on individual impact of sources on visibility impairment in Class I areas.

- The BART rule would require the facilities to perform the BART engineering analyses for BART determination based on the EPA guidelines and the additional information provided by the Department. In determining a level of control as BART the following criteria need to be considered:
  1- Available technologies
  2- Costs of compliance
  3- Energy and non-air quality environmental impacts of compliance
  4- Existing pollution controls
  5- Remaining useful life of the source
  6- Degree of visibility improvement

- The rule would allow the averaging of SO2 and PM emissions among the sources subject to BART within a facility. For NOx emission, a broader averaging approach is in consideration. It would allow trading among all sources within a facility. The corresponding NOx mass cap for each affected facility would be set at a level that it would result in a greater reasonable progress compared to the reduction achievable by applying BART on sources subject to BART.

- The BART rule would require the facilities to provide their analyses for BART determination with all supporting documents for the Department review and interim BART determinations.

- The interim BART determinations or the level of controls representing BART, and compliance schedules would become contractual in administrative orders.

- The department would inform the facilities of their final BART level of controls and compliance schedules after EPA has approved the State Implementation Plan.

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BART-ELIGIBLE SOURCES IN WISCOSIN

FID	facility	BART Category	Potential to emit (preliminary) NOx tpy	PM10 tpy	VOC tpy	SO2 tpy
111003090	Alliant Energy-Columbia Generating Station	1	41951	12165	1261	113821
113004430	Madison Gas & Electric Co Blount St	1	580	35	11	6
113008390	WIS DOA / UW Madison--Charter St	22	1609	53	20	6506
122014530	Alliant Energy, Nelson Dewey Gen Station	1	9,327	186	135	13,569
154009130	Goldschmidt Chemical Corporation / Degussa	21	17	1	299	59
157003550	Grede Foundries, Inc.	20	181	192	188	293
241007690	We Energies-Oak Creek Station	1	36,796	281	209	72,760
241007800	We Energies-Valley Station	1	12,160	272	40	48,616
241014620	PPG Industries	21	128	16	875	43
252006370	S.C. Johnson & Son, Inc.(Waxdale Plant)	21	175	29	270	622
405031990	WI Public Service Corp - JP Pulliam Plant	1	8,594	489	24	27,717
405032210	Procter & Gamble Paper Production Company	22	2577	542	18	8242
405032870	Fort James Operating Company	22	4043	362	14	37344
408021020	Brillion Iron Works Inc	20	37	339	379	4
445031180	International Paper Kaukauna Facility	3, 22	1827	620	77	11699
460033090	WP & L Alliant Energy - Edgewater Gen Station	1	29102	1241	378	50714
469033730	Waupaca Foundry Inc. - Plant No 1	20	12	1	1226	0
606034110	Dairyland Power Coop Alma Station	1	5279	190	67	21502
663020930	Dairyland Power Coop Genoa Station-EOP	1	5545	3024	54	133898
735008010	Packing Corporation of America-Tomahawk	22	638	154	261	5882
737009020	Wisconsin Public Service Corporation- Weston Plant	1	11752	277	77	90069
737009570	Mosinee Paper Corp	3	1205	678	360	5912
772010140	Stora Enso No. America-Wis. Rapids Pulp Mill	3	3836	1702	1406	5386
772010690	Domtar A. W. Corp-Nekoosa	22	1226	797	180	4261
816009590	Murphy Oil USA	11	322	16	75	449
816036430	C L M Corporation- Superior	12	307	17	32	184

BART SOURCE CATEGORIES

BART Category	Source Category Name	Principal SIC	Principal SCC(s)
1	Fossil Fuel-fired Steam Electric Plants (250 MMBTU heat input per hour)	4911, *4931, 4939*	101xxxxx
2	Coal Cleaning Plants (thermal dryers)	2999	305010xx
3	Kraft Pulp Mills	2611, 2621, 2631	307001xx
4	Portland Cement Plants	3241	305006xx, 305007xx
5	Primary Zinc Smelters	33xx	303030xx
6	Iron and Steel Mill Plants	3312	303015xx
7	Primary Aluminum Ore Reduction Plants	3334	303001xx
8	Primary Copper Smelters	3331	303005xx
9	Municipal Incinerators (> 250 tons refuse per day)	4953	503005xx
10	Hydrofluoric, Sulfuric, and Nitric Acid Plants	2819	3010700x
11	Petroleum Refineries	2911	306xxxxx
12	Lime Plants	3274	305016xx
13	Phosphate Rock Processing Plants	1429	305019xx
14	Coke Oven Batteries	3312	303003xx
15	Sulfur Recovery Plants	2819	30603301, 31000208
16	Carbon Black Plants (furnace process)	2895	30100503, 30100509
17	Primary Lead Smelters	3339	303010xx
18	Fuel Conversion Plants	not applicable	not applicable
19	Sintering Plants	not applicable	not applicable
20	Secondary Metal Production Facilities	3341, *3313, 3321*	304xxxxx
21	Chemical Process Plants	28xx	301xxxxx
22	Fossil Fuel-Fired Boilers (250 MMBTU heat input per hour)	not applicable	(102001xx-102008xx), (103001xx-103007xx)
23	Petroleum Storage and Transfer Facilities (capacity > 300,000 barrels)	5171, 5172	306xxxxx
24	Taconite Ore Processing Plants	3295	303023xx
25	Glass Fiber Processing Plants	32xx	305012xx
26	Charcoal Production Facilities	2819	301006xx